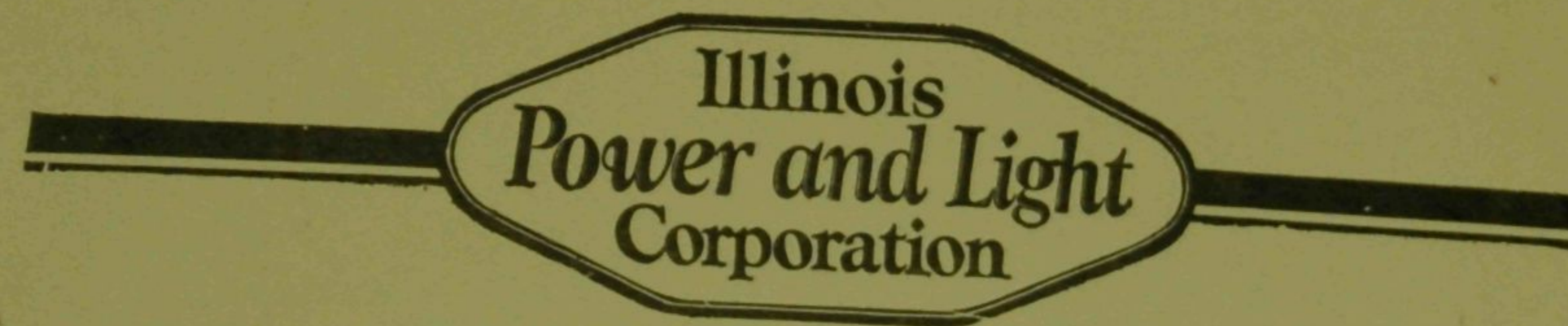


The 1920
Surrealist
Sketch

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In Ages Past

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FROM THE WORRY AND GRIEF OF WASH-DAY

Meet us at booth number 6, EE Show. We will show you the ABC Double "A" Girator type washer. You will be satisfied.

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Opposite City Hall

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AUTHORIZED DEALER OF

ATWATER-KENT **RADIOS**

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Presto-Lite Storage Batteries

Look for our exhibit in Booth 33

Twin City Battery Service Company

Phone 3883

18 E. Washington

THE PURPOSE OF THE SHOW

There has been such a rapid advance in the field of Electrical apparatus in the past few years, that it has been almost impossible to keep in touch with all the details. Hence, the Electrical Engineering Society has considered it advisable to place this display before the public as an educational feature. The management has made every effort to have represented all the various uses to which electricity can be put. Some purely educational exhibits have been added for the purpose of explaining the fundamental and less complex theories in electrical development. Many so-called "freak stunts" are included in the program for the purpose of arousing keen interest and demonstrating ingenuity on the part of the students. The patronage of past shows has proved the worth of the undertaking.

AN APPRECIATION

No one group of people could put on an Electrical Show alone. Without the earnest coöperation of the students and faculty in the Department of Electrical Engineering, it would have fallen flat. Without the generosity of merchants and manufacturing companies that loaned apparatus, material, and exhibits, the Show would lack interest, and magnitude. Wherever help was asked, it was gladly given. That was what made it possible to arrange the show; to give entertainment and instruction to a large number of people. To all those who had any part in the Show, and who helped to make it a success, the Staff extends its most sincere thanks and appreciation.

1926 ELECTRICAL ENGINEERING SHOW

UNIVERSITY OF ILLINOIS

APRIL 8, 9, 10, 1926

MATINEE, APRIL 10

E. E. LABORATORY

GYM ANNEX

Under Management of the E. E. Society

FACULTY OF THE ELECTRICAL ENGINEERING DEPARTMENT

PROFESSOR E. B. PAINE, Head of the Department

MORGAN BROOKS

E. H. WALDO

A. R. KNIGHT

E. A. REID

J. T. TYKOCINER

H. A. BROWN

C. E. SKRODER

C. A. KEENER

J. O. KRAEHEBUEHL

M. A. FAUCETT

F. C. MOCK

E. E. PERKINS

L. B. ARCHER

Head of the Laboratory Shops, W. S. GOODSPEED

With Reference to the "Electrical Show"

I would repeat what I said once before: "This is a 'student activity' for which, it seems to me, a great deal may be said. It is educational, interesting, amusing, and gives opportunity for the exercise of ingenuity and talent." I wish that all the energy which students can spare from the regular educational processes of the University could be turned into such helpful auxiliary activities. Constructive activities make men; destructive activities make hoodlums. I hope that the success of the Electrical Show will stimulate rivalry in producing "activities" of a similar character.

DAVID KINLEY.

You Are Invited

to visit and inspect
a modern display of

Electric Railway Equipment

on exhibition on track during the Electrical
Show. See the monster 1,000 Horse Power
Freight Locomotive

Illinois Traction System



McCrory, Burnett, Morf, Henderson, King
Tartak, Norris, Hackbarth, Jones, Levy, Lynch

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F. B. POWERS.....	Stunt Engineer
W. T. KING.....	Manager of Exhibits

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Gymnasium Equipment
Track Equipment

We also carry a complete line of Students' Supplies

Electrical Engineering Loan Fund

G. W. NORRIS, '26

The financial end of the Electrical Engineering Show is a very important matter. Students are not going to indulge in such activities without some means of meeting expenses. The University would not permit a show to be held if it were not entirely self-supporting and backed by the whole Electrical Engineering department. So if the Electrical Shows are going to be continued in the future, they must be supported by the patronage of the University and of the residents of the State of Illinois.

There is one and only one purpose for which the Electrical Show was organized outside of publicity for the Electrical Engineering Students of the University. That purpose is the development of those who will actively engage in the production of the show. Many days—yes, even months—of planning and labor are necessary for its success. What other activity could the Engineering Student engage in which would be as educational and as helpful to him in his profession?

A natural question for anybody to ask is one concerning the ultimate use of profits derived from the Shows. During the past the money has been accumulating to the credit of the Electrical Engineering Society, which is the Engineering Society open to all electrical engineering students in the University. This money has not been used for any purpose outside of the Electrical Shows. Previous to the present show about \$1900.00 has been accumulated through savings and interest. Liberty Bonds have been bought with this, the interest from which is to be used for the promotion of the 1926 show. It is the intention of the 1926 management to buy more Liberty Bonds with the funds from this year's show.

The Electrical Engineering Society has been working on the establishment of what is to be known as the "Electrical Engineering Student Loan Fund." In order to establish a fund that would be of any practical benefit, it is necessary to have \$5000.00 or more to start the fund. It is to this end that the profits accumulated from the Electrical Shows are to be put. This money will be turned over to the University to be put in a separate fund for deserving students in Electrical Engineering. The students of electrical engineering work hard for their shows and there is no just reason why they should not be given full benefit of the profits. The Electrical Show held at the University of Illinois biennially is known all over the United States among Engineering Colleges as the only electrical show of its size put on by college men while doing under-graduate work.

GYMNASIUM ANNEX

1. Printing Telegraph Booth 1
This device is used for the high speed transmission of messages without the use of a code. Western Union Telegraph Co.

2. Clock Exhibit Booth 1
These clocks show how Western Union Clocks are wound and set. They also show the time in the different cities of the world. Western Union Telegraph Co.

3. Broadcasting Studio Booth 3 and 4
This room is built with double, soundproof walls, which are hung with draperies to prevent echoes as is done in all regular stations. Programs being put on here are being broadcast by Station WRM, located in the E. E. Laboratory, top floor. The loudspeaker outside of the studio is connected to the line so that those outside may hear the programs which are being put on inside.

John Franks '27 D. H. Vance '27
I. G. Ross '27 F. M. Schmidt '29

4. Automatic Telephone Apparatus Booth 5
This equipment represents the newest development in automatic telephone apparatus. Automatic Electric Co.

5. Automatic Telephone Booth 5
This apparatus displaces the "Hello Girl," by using the dial impulses to control relays and selectors, which connect the calling subscriber to the party he wants. This is an example of the apparatus used in Champaign and Urbana. Apparatus loaned by Automatic Electric Co.
O. C. Levy '26 F. W. Wodrich '27
F. W. Yarlone '26 N. N. Wright '28
H. W. Laube '26

6. Public Utilities Booth 7A
This exhibit shows the development and extent of the public utilities industry. Public Service Co. of Northern Illinois.
J. D. Maccono '26

7. Arc Welding Booth 17
This is the best type of portable welding machine. The metal is fused by the heat of the arc. Westinghouse Electric & Mfg. Co.
R. L. Dugger '26 E. F. Hettell '26

8. Model Railway System Booth 13

Railway Signal and Automatic Control Exhibit

This complete miniature electric railroad has the following features:

1. Color Light Automatic Block Signals.
2. Safety Automatic Train Control.
3. Automatic Passing Track.
4. Remote control Freight Locomotives
5. Scale Model High Speed Interurban Cars

The entire exhibit was planned and constructed by students, with the

We don't perform miracles—but we always give good values

Jos. Kuhn & Co.

Opposite the Library Under Bradley Hall
On Wright Street
You'll Find the

A R C A D E
Confectionery

Serving **QUALITY** Confections
with **SNAPPY** service
at a **POPULAR** price

Look for the Orange and Blue Lights

Zimmermann

Men's Wear

"Always Something New"

BRADLEY ARCACE

aid of the following: Electric cars from Chicago, North Shore and Milwaukee Railroad. Relays from Automatic Electric Co.

I. Jones '26	H. B. Martin '28
A. L. Dixon, Grad	R. H. Tull '28
J. E. Baudino '27	J. M. Waincott '28
C. A. Basedow '27	M. W. Woodruff '29
F. M. Funkhouser '28	F. W. Wodrich '27
C. F. Gehant '28	E. B. Sullivan '29
J. H. Manley '28	A. C. Schaeffer '29

9. Mercury Arc Rectifier **Booth 18**

This is the latest type of rectifier for handling large currents and is used for railway work. General Electric Company

10. Gymnasium Annex Substation

Direct current for the blue-printing machine and other apparatus is generated here, and all power for the whole Gym Annex is controlled.

11. Electric Meters and Transformers **Booth 31**

The large meter is a scale enlargement of a standard house lighting meter. Sangamo Electric Co.

H. L. Kunz '26 G. M. Lochard '28

12. Storage Batteries **Booth 32**

All types of batteries for automotive use. Atwater Kent Radio equipment of all kinds. Twin City Battery Service Co.

13. Electric Appliances **Booth 33**

New household appliances that save labor and add convenience in the home. Illinois Power & Light Corp.

14. High Tension Substation **Booth 27**

This equipment is used between the high voltage transmission lines and the low voltage local distribution systems. Delta-Star Electric Co.

15. Radio Control Car **Booth 28**

The machine is started, stopped and steered from a distance. Radio signals are received in the car, and operate relays which control the movement of the car. A storage battery in the car supplies the power.

R. D. Kell '26 W. T. King '26
M. Shafer '26

16. New Model Radio Receivers **Booth 29**

These are the finest type of radio receivers and amplifiers for the home. Be sure to see the electric reproducing phonograph.

Cable Piano Co.

17. Frying Eggs by Radio **Booth 34B**

No fire is needed, as the heat is generated in the pan itself.

W. S. Duncan '26

18. Electric Blueprinting Machine **Booth 2**

This machine is used for the high speed production of large numbers of blue prints. C. F. Pease & Co.

GORDON'S

Everything you wear dry cleaned with care

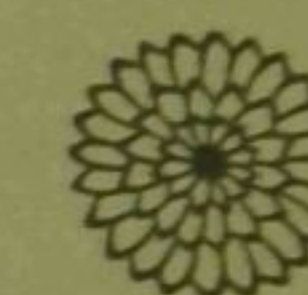
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Presenting the Highest
Development in Radio Receivers

R. C. A. RADIOLAS

ON DISPLAY IN BOOTH 29

By

Cable Piano Co.

19. Photo Electric Cells Booth 26
Some experiments with photo electric cells, showing how light may be transformed into electrical energy. Booth 19
20. Calculating Machine Booth 19
Demonstrating the uses of modern calculating machines.
Monroe Calculating Machine Co.
21. Electric Measuring Instruments Booth 21
Jewell instruments are used by Radio Fans more than any other make. Jewell manufactures meters for more than 95% of the medical electrical devices, and for many power companies.
Jewell Electrical Instrument Co.
22. Perpetually Flowing Wine Bottle Booth 23
There is no need for a well stocked cellar with this wine bottle in the home.
J. H. Hazelhurst '26 L. Harrison '29
F. Broughton '29
23. Ring the Peg Booth 23
Mysterious forces of nature prevent the most skillful from scoring. Try your skill.
D. Brown '29 C. J. Franks '27
24. Rotating Mercury—Tin Can Motor Booth 34B
There is no fake about this. A rotating magnetic field makes the tin can turn. The principle is the same as for the induction motor.
T. W. Fowler '26
25. Magic Desk Lamp Booth 34A
This lamp operates without wires or batteries.
W. E. Lynch '26 W. T. Henderson '26
26. Wireless Electric Fan Booth 34A
Another wireless wonder. Can you account for its operation?
W. E. Lynch '26 W. T. Henderson '26
27. Temple of Venus
Electric Lighting Equipment loaned by the Reflector and Illuminating Equipment and Chicago Stage Lighting Co. make an interesting variation on an old style of architecture.
O. F. Burnett '26 J. D. Prouty '26
F. P. Morf '26
28. Model Ignition System Booth 34A
This shows how the gasoline mixture is exploded in the cylinders of an auto engine.
W. T. Henderson '26 W. E. Lynch '26
29. Theatre Lighting Control Board Substation
By means of complicated circuits and switches, the board can be set for ten combinations of lights, and any combination can be turned on at the desired time.
30. Information Bureau Substation
Do not leave the building until you have had everything explained. This is an educational show, and we want you to learn as much as possible.

Pitsenbarger & Flynn

Suits Made to Measure
Cleaning, Pressing and Alterations

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MADE FRESH DAILY

CHAMPAIGN
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The INMAN Hotel

NEAR THE I. C. STATION
Champaign, Ill.

T. M. Bacon & Sons, Inc.

PAINTS :: GLASS
WALL PAPER

Cor. Walnut and Taylor Streets

31. Singing Arc Booth 28
Capacity and inductance, shunted around the arc form an oscillating circuit, the frequency of which is controlled by varying the constants of the circuit. F. F. Fardig '29
32. Radio Signal Corps Exhibit Booth 24
This sort of apparatus will be relied upon to keep army communications intact, in future wars. Bill Branch '26 H. Levy '29
33. Bouncing Ball Booth 22
This interesting and uncanny experiment depends for its success on the perfect roundness of the ball bearings. New Departure Ball Bearing Co.
E. M. Sobota '26 Ray Morrison '26
34. Wagner Products Booth 20
An exhibit of high grade motors and transformers. Wagner Electric Co.
35. Laundry Equipment Booth 6
Modern equipment to make woman's work easier. Ideal Electric Co.
36. Electric Reproducing Orthophonic Phonograph Booth 39
Electricity gives good tone and volume. Western Electric Co.
37. Reflector and Illuminating Co. Booth 9
The newest types of reflectors for stage and store window lighting.
38. Illumination Products Booth 25
This exhibit shows the application of electricity for illumination purposes in the up-to-date home. Benjamin Electric Co.
39. Western Electric Company
Here is a display of the newest equipment in electrical communication apparatus.
40. ~~Central Electric Co.~~ Commonwealth Edison Co. Booth 7B
This is the school which trains engineers, for all the public utilities under the Insull Properties.
41. Commercial and Industrial Equipment Booth 11
An exhibit of cable, wires, switching equipment and industrial supplies. Central Electric Company.
42. Delco Lighting System Booth 8
This is a self-contained farm lighting unit, using a gasoline motor, and a small built in generator. Johnson Electric Co.
43. Cootie Power Motor Booth 34A
This self starting synchronous motor is rated at one fly power, and is used in Sangamo Meters for driving a recording mechanism. P. H. Tartak '27
44. Revolving Color Plates Booth 34B
Astonishingly weird color combinations can be obtained by combining colors on the screen with revolving colored plates. F. Z. Leib '26

BE SURE YOU SEE THE
MONROE
HIGH-SPEED
ADDING CALCULATOR

You will be interested in witnessing a demonstration
of everything modern in calculating machines

A hearty welcome awaits you in Booth No. 19

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THE OLDEST ELECTRIC REFRIGERATION
FOR THE HOME

VOSS WASHERS

THE PIONEER IN WASHING MACHINES

SEE OUR DISPLAY IN BOOTH 35

45. Magnetic Personality Tester

Booth 4

Have you a strong personality, and large vitality? The student Colonel of the R. O. T. C. burned out the instrument when he gripped the contacts.

C. A. Butts '26

O. E. Krell '26

N. H. Davis '28

46. Model Locomotive

This is a scale model of the freight Locomotive used in the C. M. & St. P. R. R.

I. Jones '26

47. Kelvinator

Booth 35

A very efficient refrigeration machine for the home.

Reliable Plumbing Co., Champaign, Ill.

48. Public Address System

This announcing system is loaned by the Western Electric Company of Chicago. It is of the type used in auditoriums in order that large audiences may hear the speaker.

50. Electric Sign

This sign is very light for its size, so it is not dangerous, hung across the street.

R. L. Dugger '26 E. F. Hettel '26

51. Outside Flood Lighting

Powerful floodlights make the street as bright as day.

High Power Street Lighting Fixtures

C. H. Rex '26 F. W. Woeltge '26

52. High Power Street Lighting Fixtures

These fixtures represent the most modern development in street lighting equipment.

Macbeth Glass Co.

53. Traveling Sign

This sign has been operating during the past week. It is the only thing of its exact type in existence.

G. C. Armstrong '26

L. Lambert '29

W. E. Lynch '26

L. T. Bourland '26

WOODSHOP

54. Talking Moving Pictures

After many years of research, a device has been perfected for recording the voice impulses simultaneously with the action upon the same film. This apparatus was developed entirely at this university by Prof. Tykociner and uses the photo-electric cell developed by Prof. Kunz, of the Physics Department. This exhibit was put on with the assistance of Prof. Tykociner and his assistants, Mr. Garner and Mr. Armstrong.

O. C. Levy '26

E. Rabinowitz '26

L. T. Bourland '26

H. A. Demmer '26

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Satisfaction Guaranteed

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THE SHOE REPAIR MAN

528 E. Green Street

Champaign, Ill.

Over Andy's Cafe

Kandy's Barber Shop

G. C. (KANDY) EHRGOTT, Prop.

12 Chairs

625 E. Green St.

Champaign, Ill.

55. Life Saving Crew

A first aid squad has been organized to take care of any one who may be injured during the show. We want to take every precaution to make this show safe, as well as exciting and entertaining. J. Hazelhurst '26

RAILWAY DEPARTMENT

Exhibit Located at University Spur at Burrill Ave.

56. The Latest in Electric Locomotives

This is a modern 1000 Horse Power Freight Locomotive used now on the lines of the Illinois Traction Co.

57. Model Electric Train

This is the finest in equipment for luxurious comfortable travel. It is the show train of the Illinois Traction Co.

58. University Test Car

This specially arranged car is used by the Railway E. E. department for obtaining data on power and control equipment for electric traction work. It is supplied with an automatic starting device, and recording apparatus for measuring current, voltage, power, speed, unevenness of track, and many other conditions. J. C. Harmon '26 C. H. Richards '27

ELECTRICAL ENGINEERING
LABORATORY

59. 200,000 Volt Transformer.

This piece of apparatus multiplies a voltage 1000 times, and is effectively used for testing insulators, and for producing artificial lightning.

P. W. Emley '26

H. W. Keller '26

R. W. Stromer '26

60. Dancing Cigarettes

This strange effect is controlled and directed by spiritual forces, operating at a distance. Peterson '28 Rice '27

61. Ladder Spark

The heat of the spark produces a draft of air, which blows it to the top of the wires. No betting allowed. H. Hittson '26 K. Gay '27

62. Electromagnets

By a very small expenditure of power, large weights are lifted by these coils of wire and pieces of iron. Large magnets of this type are used for moving scrap iron in steel works.

63. Electric Cannon

The possibilities of electricity instead of gunpowder are virtually unlimited. Electric cannons mounted on a battleship would throw a heavy projectile at least a mile.

R. H. Timmons '28

R. C. Naumann '28

O. E. Krell '26

Paris
Dyeing and
Cleaning Co.

112 W. Clark St., C.

Phone 5944

Wright
Sweet
Shop



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Rent a Car by the Mile

Livingston & Edwards

Back of Woolworth's 10c Store

Phone 2727

A Printer

is one who sets truths on end and stamps them with a mighty impression upon the consciousness of his race.

The Service Press

is not only "A Printer" organization but is an organization for service as well. Problems that worry you are a pleasure to us. See us at 111 N. Walnut Street and "leave your troubles."

64. Electric Pencil

Electricity is used for marking names and figures on metal.

J. L. Wiegreffe '28

65. Wireless Light

This light works with no apparent connection to power. There is no wire connected to it. Is it radio power transmission?

E. F. Wood '28

66. Reinart's Modulascope

An amateur radio operator can hook up apparatus like this very quickly, and get a good idea of the sort of filter his plate supply needs.

G. D. Greene '28 F. G. Taborsky '27

67. Short Wave Radio Apparatus

This is used in the research laboratory, for working with radio waves between 3 and 6 meters long.

R. O. Askey '26 H. F. Moore '28

68. Crystal Oscillator Control Apparatus

Quartz crystals, ground in the shape of thin smooth discs, will control oscillations in an electric circuit, and will keep the frequency constant within a very small percent. Variation of the frequency of such oscillations is so small as to be immeasurable.

L. W. Wixson '27

69. Model Lighting Exhibit

This shows the possibilities of colored lighting, to give beautiful effects, for theatres, store windows, or homes.

Bill Branch '26

70. Optical Illusion

Now you see it, now you don't. Can you believe your eyes?

T. P. Beggs '26 H. G. Creamer '29

71. Hourly Cost of Operating Household Appliances

The meter shows the cost of using various household appliances, in terms of cents per hour.

P. H. Frank '27 F. F. Fardig '29

72. Rotary Converter

A set of this type is used in substations that supply power for traction service.

73. Bucking Bronco

Electrical Engineers have dreams that look like this, after a hard day, spent in the laboratory, trying to make a machine run without balking.

L. R. Douglas '26 R. W. World '28

74. Man Made Lightning

More than 1,000,000 volts are required to make the spark crash across the nine foot gap. Nikola Tesla in about 1890 discovered that very high voltages could be produced by discharging a large condenser through the primary coil of an air core transformer, which has few turns in the primary, and very many turns in the secondary.

P. W. Emley '26

Wayne Hickman '26

E. K. Kane '27

75. Electric Furnace

Very high temperatures are produced when several thousand amperes are forced through a stack of graphite blocks, which are part of the furnace wall.

R. M. Price '26 R. O. Askey '26

The White Line Is a Good Laundry

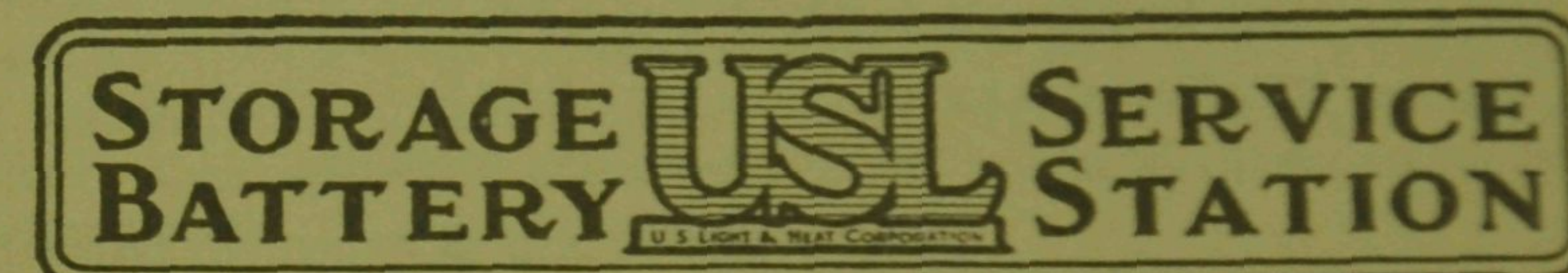
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Urbana-Lincoln Hotel

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Radios, Generators, Starters and Ignition

Champaign Battery and Electric Service

Proprietor, Wm. B. Carr

406 E. University Ave.

Phone 2169

76. Calibration Laboratory

Extremely accurate and expensive instruments are kept in this room. They are used as standards for correcting the working instruments.

E. K. Kane '27 R. E. Berthold '28

77. Recording Wattmeter

This instrument records the power being used at all hours of the day and night.

78. Synchronizing Alternators

The rotation of the light in the lamps shows when the generators are properly synchronized so that they can be connected in parallel.

79. Instrument Exhibit

The collection of instruments in this room is worth nearly \$5,000 and represents the best laboratory instruments on the market. Some of the instruments have been opened to give an idea of the fine workmanship of these measuring instruments.

80. Switchboard

This board controls the distribution of power to the south end of the laboratory.

81. Street Car Controllers

These two crane motors are controlled by the handle on the controller box. They can be started, stopped, and reversed.

82. Outdoor Substation

This is a late design of outdoor transformers and lightning arresters. It is a three phase, 33,000 volt outfit.

83. Magnetized Shaft Alternator

The field windings magnetize the shaft longitudinally.

J. R. Simpson '26 F. G. Nuernberger '28

84. Lamp Bank

This is used by E. E. Students for loading machines, and for dissipating energy, not for furnishing light to the laboratory.

85. Fynn Weichsel Motor

Motors of this type are used in industrial plants for power factor correction. Up to 150% load it runs as a synchronous motor. Upon overload the motor breaks down, and runs as an induction motor.

J. W. Green '26

86. Foolproof Motor

This motor cannot be injured by the operator, because to start or stop it, he has only to turn the controller handle. Automatic relays control the supply of power to the motor.

87. Sine Wave Set

This set is designed to produce the pure sine wave for experimental purposes. This is accomplished by using a distributed field and armature winding.

88. The Automatic Elevator

An elevator controlled from a switchboard on the lower part of the

shaft. This type of elevator is in practical use. The elevator in the Administration Building is operated on this principle.

C. D. Pearson '26 J. J. Rochelle '27

89. Variable Speed Motor

The speed of this motor is controlled by the novel system of moving the armature in and out of the pole space.

B. Donovetsky '26

90. Automatic Reclosing Circuit Breakers

These breakers open in case of short circuit and close automatically when the line is cleared.

91. 45 K. W. Set

This outfit consists of an alternating current synchronous motor, directly coupled to a direct current generator. It is used for supplying direct current for experimental purposes in emergencies and has a capacity of 45 K. W. A.

92. 85 K. W. Motor Generator Set

This set consists of an alternating current motor driving a direct current generator which supplies the laboratory with direct current.

93. 100 K. W. Set

So much noise was produced that a sound proof wall was built in order that classes would not be disturbed. Any one of the three generators can be made to supply power for the laboratory.

94. W. R. M.

The programs broadcast from the studio in the Gym Annex are being transmitted from this Radio Station. Its output is 500 watts, and it has been heard all over the United States. This station is used mainly for experimental work. The non-carrier wave system of transmission was developed here by Professor H. A. Brown.

R. D. Kell I. G. Ross '27

95. Storage Battery Room

These batteries are 240 ampere hours capacity and are used for experimental and research work in the laboratory.

96. Mercury Arc Rectifier

97. Tungar Rectifier

98. Vibrating Type Rectifier

99. Cell Type Rectifier

100. Electric Furnace Room

Notice the electric furnaces and various pumps and pieces of apparatus used for experimental work.

101. High Tension Room

This transformer supplies power to the tesla coil in the rear of building.

102. The Museum

The striking feature of this exhibit is that less than thirty-five or forty years ago, all this apparatus was up to date. This shows the extremely rapid growth of electrical development. Many of these machines were made in the laboratory by former students for special work.

103. Electric Amusement Park

An interesting group of models, including a Merry-go-round, whip, roller coaster, flying sea-planes, and ferris wheel.

104. Cooper Hewitt Lamp

The light from this lamp, although very easy to work by, lacks red and yellow rays, so that drug store complexions look particularly artificial under its effect.

105. Loud Speaking Horn

By means of the voice amplifier, the human voice may be amplified thousands of times, so that it can be heard for long distances.

106. Holophane Street Lighting Fixture

The globe of this is so designed that it refracts light along the street, and does not waste it overhead or directly underneath the lamp. Refractors like this are used inside all modern street lighting fixtures.

107. Oscillograph

This instrument shows by a beam of light, the shape of the sound waves composing the voice. It is used also for recording transient electrical phenomena.

108. Fluorescence, with Ultra-Violet Light

Invisible high frequency radiation from the arc causes visible light of a lower frequency to be emitted from a large variety of substances. Ultra violet light is used for secret message transmisison by the Signal Corps.

H. Soliday '27 L. E. Wetherhold '26

109. Braun Oscillograph

Electrons, streaming through the tube in a narrow beam, cause a spot on the screen at the end of the tube. The tracing of this spot of light records the wave form of an electric current in the coils, by the interaction of the stream of electrons with the magnetic field produced by the current.

J. E. Baudino '27

C. F. Robbins '27

R. H. Woolsey '28

L. E. Wetherhold '26

110. Static Machine

This machine generates a very high voltage, to produce a stream of electrons in the Braun Oscillograph Tube.

J. E. Baudino '27

111. High Frequency Research Laboratory

Research work is carried on here on radio waves from 1 to 6 meters long and also on vacuum tubes.

112. Communications Laboratory

200 mile artificial line developed by C. A. Keener. This equipment is used for research on telephone and power line circuits.

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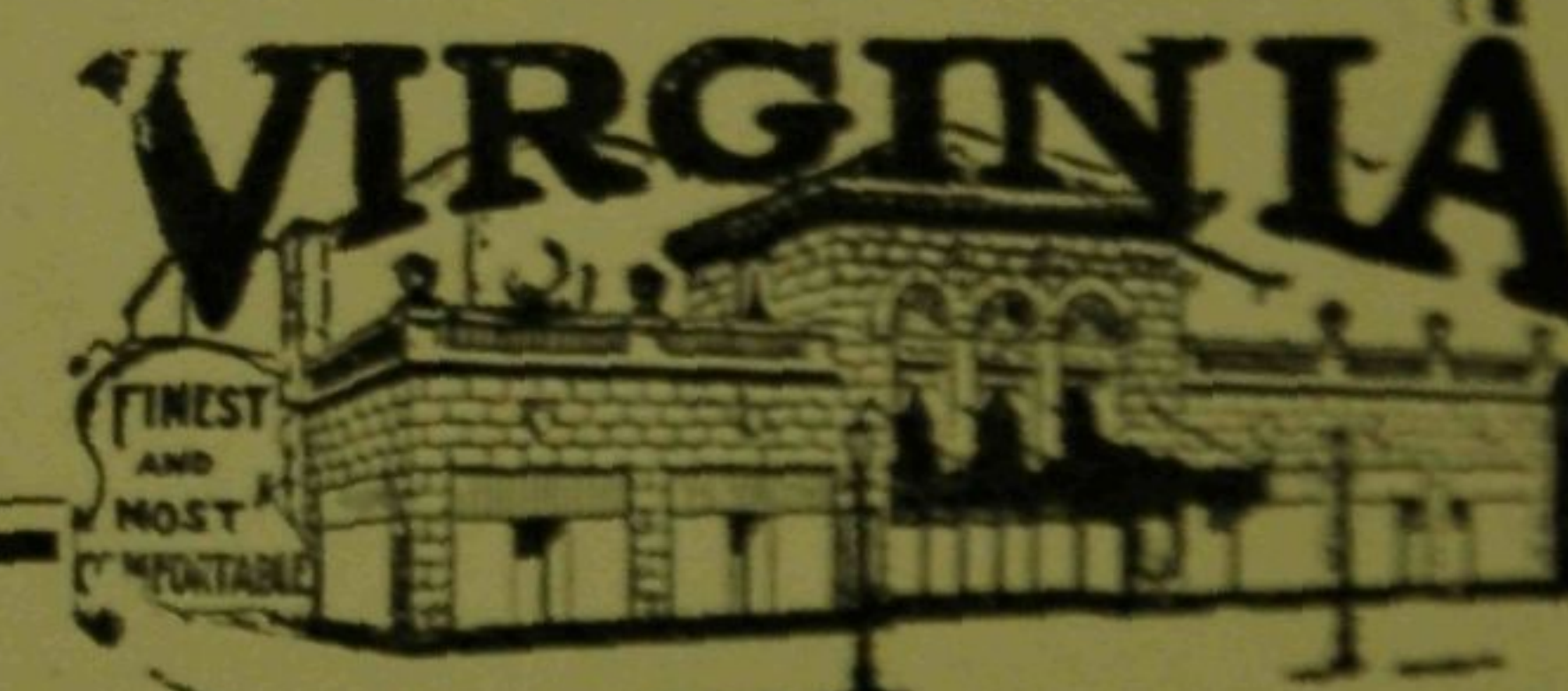
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